

## A B S T R A C T

Novel Tools for the Diagnosis and Treatment  
of Alzheimer's disease

The invention relates to epitopes of the tau protein which are specifically occurring in a phosphorylated state in tau protein from Alzheimer paired helical filaments, to protein kinases which are responsible for the phosphorylation of the amino acids of the tau protein giving rise to said epitopes, and to antibodies specific for said epitopes. The invention further relates to pharmaceutical compositions for the treatment or prevention of Alzheimer's disease, to diagnostic compositions and methods for the detection of Alzheimer's disease and to the use of said epitopes for the generation of antibodies specifically detecting Alzheimer tau protein. Additionally, the invention relates to methods for testing drugs effective in dissolving Alzheimer paired helical filaments or preventing the formation thereof.